

5 **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 10 1. (Withdrawn) A machine comprising:
an application chamber portion containing an application apparatus, the
application apparatus is adapted to introduce a chemical mixture into contact with
a substrate, wherein the chemical mixture comprises a non-aqueous solvent and a
chemical solute, and wherein the substrate with the chemical mixture forms a wet
15 substrate; and
a removal portion connected with the application portion wherein the non-
aqueous solvent is removed from the wet substrate, leaving a substrate with
remaining chemical solution.
- 20 2. (Withdrawn) A machine as set forth in claim 1, wherein the application
apparatus is selected from a group consisting of a foam applicator, spray
applicator, and a padding applicator.
- 25 3. (Withdrawn) A machine as set forth in claim 1, wherein:
the removal portion comprises a removal apparatus for removing a portion
of the chemical mixture from the wet substrate, leaving a substrate with remaining
chemical mixture;
a vacuum chamber in fluid communication with the removal apparatus for
lowering a boiling point of the non-aqueous solvent in the substrate with
30 remaining chemical mixture; and
an evaporator apparatus connected with the vacuum chamber to evaporate
the non-aqueous solvent into a solvent vapor.
- 35 4. (Withdrawn) A machine as set forth in claim 3, wherein the removal apparatus is
a squeeze roller.

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5. (Withdrawn) A machine as set forth in claim 3, wherein the evaporator apparatus is a heat exchanger.

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6. (Withdrawn) A machine as set forth in claim 5, wherein the heat exchanger is a steam-based heat exchanger.

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7. (Withdrawn) A machine as set forth in claim 3, further comprising:
a blower apparatus in fluid communication with the machine, creating a negative pressure and thereby preventing vapors from escaping; and
a separator connected with the blower apparatus to remove remaining solvent vapors.

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8. (Withdrawn) A machine as set forth in claim 7, wherein the blower apparatus comprises an item selected from a group consisting of a fan, and a blower.

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9. (Withdrawn) A machine as set forth in claim 7, wherein the separator comprises a mist eliminator and a high efficiency separator, further removing solvent vapors.

10. (Withdrawn) A machine as set forth in claim 7, further comprising a collector portion for collecting removed non-aqueous solvent.

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11. (Withdrawn) A machine as set forth in claim 10, wherein:
the collector portion comprises a vapor scrubber chamber, where solvent vapor is pushed into the vapor scrubber chamber via the negative pressure;
a condensing apparatus associated with the vapor scrubber chamber, condensing the solvent vapor into a condensed liquid solvent solution;
a re-boiler tank in fluid communication with the vapor scrubber chamber and the removal apparatus, the re-boiler tank collecting the condensed liquid solvent solution and the portion of the chemical mixture into a collected solution,

5 where the collected solution is heated to vaporize the non-aqueous solvent into a re-vaporized non-aqueous solvent;

 a cooling chamber connected with the re-boiler tank, where the re-vaporized non-aqueous solvent is condensed into a re-condensed non-aqueous solvent; and

10 a recovery tank associated with the cooling chamber to collect the re-condensed non-aqueous solvent.

12. (Withdrawn) A machine as set forth in claim 11, wherein the condensing apparatus is a water spray mechanism.

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13. (Withdrawn) A machine as set forth in claim 11, wherein the re-boiler tank further comprises a steam-based heat exchanger.

14. (Withdrawn) A machine as set forth in claim 11, further comprising a mix tank,
20 wherein the re-condensed non-aqueous solvent is pumped from the recovery tank to the mix tank, where it is combined with appropriate chemicals to create the chemical mixture.

15. (Withdrawn) A machine as set forth in claim 12, wherein the application
25 apparatus is selected from a group consisting of a foam applicator, spray applicator, and a padding applicator.

16. (Withdrawn) A machine as set forth in claim 15, wherein the removal apparatus
30 is a squeeze roller.

17. (Withdrawn) A machine as set forth in claim 16, wherein the evaporator apparatus is a heat exchanger.

18. (Withdrawn) A machine as set forth in claim 17, wherein the heat exchanger is a
35 steam-based heat exchanger.

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19. (Withdrawn) A machine as set forth in claim 18, wherein the blower apparatus comprises an item selected from a group consisting of a fan, and a blower.

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20. (Withdrawn) A machine as set forth in claim 19, wherein the separator comprises a mist eliminator and a high efficiency separator, further removing solvent vapors.

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21. (Withdrawn) A machine as set forth in claim 20, wherein the re-boiler tank further comprises a steam-based heat exchanger.

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22. (Withdrawn) A machine as set forth in claim 21, further comprising a mix tank, wherein the re-condensed non-aqueous solvent is pumped from the recovery tank to the mix tank, where it is combined with appropriate chemicals to create the chemical mixture.

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23. (Withdrawn) A machine as set forth in claim 22, further comprising an additional application apparatus, where the chemical mixture is applied to an additional side of the substrate.

24. (Cancelled).

25. (Cancelled).

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26. (Currently Amended) A method of ~~claim 24~~, for applying a chemical solution to a substrate, comprising acts of:

forming a chemical mixture comprising a non-aqueous solvent and a chemical solute;

applying the chemical mixture to the substrate forming a wet substrate;

removing the non-aqueous solvent from the wet substrate, leaving the a

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substrate with remaining chemical solute;

5 wherein the act of removing the non-aqueous solvent from the wet
substrate comprises ~~the~~ acts of:

 removing a portion of the chemical mixture from the wet substrate,
leaving a substrate with remaining chemical mixture;

10 lowering a boiling point of the non-aqueous solvent in the substrate
with remaining chemical mixture; and

 evaporating the non-aqueous solvent into a solvent vapor by
passing the substrate with remaining chemical mixture by and against an
evaporator apparatus, such that the evaporator apparatus operates as a heat
plate to evaporate the non-aqueous solvent into a solvent vapor.

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27. (Currently Amended) A method of claim 26, wherein the act of removing a
portion of the chemical mixture further comprises ~~comprising~~ an act of using a
squeeze roller as a removal apparatus, ~~before the act of~~ for removing a portion of
the chemical mixture from the wet substrate.

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28. (Currently Amended) A method of claim 26, wherein ~~further comprising an act of~~
~~using a heat exchanger as an evaporator apparatus, before the act of evaporating~~
the non-aqueous solvent into a solvent vapor, further comprises an act of utilizing
a heat exchanger as the evaporator apparatus for evaporating the non-aqueous
25 solvent.

29. (Original) A method of claim 28, further comprising an act of using a steam-
based heat exchanger as the heat exchanger.

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30. (Currently Amended) A method of claim 26, further comprising acts of: ~~an act:~~
~~of preventing~~ solvent vapor ~~vapors~~ from escaping by creating a negative
pressure; and
removing the solvent vapor. ~~remaining solvent vapors.~~

- 5 31. (Currently Amended) A method of claim 30, wherein the act of preventing
 solvent vapor from escaping further comprises acts of utilizing a blower apparatus
 to create a negative pressure and prevent the vapor from escaping. further
 ~~comprising an act of selecting a blower apparatus before the act of preventing~~
 ~~vapors from escaping by creating a negative pressure, the blower apparatus being~~
10 ~~selected from a group consisting of a fan, and a blower.~~
32. (Currently Amended) A method of claim 30, wherein the act of removing solvent
 vapors further comprises an act of utilizing a separator for removing the solvent
 vapors, the separator further comprising an act of using a separator comprising a
15 mist eliminator and a high-efficiency separator, before the act of removing
 ~~remaining solvent vapors.~~
33. (Currently Amended) A method of claim 30, further comprising an act of
 collecting any removed non-aqueous solvent, the removed non-aqueous solvent
20 being a combination of removed solvent vapors and solvent in the chemical
 mixture that was removed in the act of removing a portion of the chemical
 mixture from the wet substrate.
34. (Currently Amended) A method of claim 33, wherein the act of collecting any
25 removed non-aqueous solvent comprises acts of:
 ~~of~~ pushing the solvent vapor into a vapor scrubber chamber via the
 negative pressure;
 condensing the solvent vapor into a condensed liquid solvent solution;
 collecting the condensed liquid solvent solution and the portion of the
30 chemical mixture into a collected solution;
 heating the collected solution to vaporize the non-aqueous solvent into a
 re-vaporized non-aqueous solvent;
 cooling and condensing the re-vaporized non-aqueous solvent into a re-
 condensed non-aqueous solvent; and
35 collecting the re-condensed non-aqueous solvent in a recovery tank.

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35. (Currently Amended) A method of claim 34, wherein the act of condensing the solvent vapor into a condensed liquid solvent solution further comprises
~~comprising~~ an act of using a water spray mechanism as a condensing apparatus
for, ~~before the act of condensing the solvent vapor into a condensed liquid~~
10 ~~solvent solution.~~

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36. (Currently Amended) A method of claim 34, wherein the act of heating the collected solution to vaporize the non-aqueous solvent into a re-vaporized non-
aqueous solvent further comprises ~~comprising~~ an act of using a steam-based heat
15 exchanger as a ~~the heating method for the re-boiler tank, before the act of for~~
heating the collected solution ~~to vaporize the non-aqueous solvent into a re-~~
~~vaporized non-aqueous solvent.~~

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37. (Original) A method of claim 34, further comprising an act of pumping the re-
20 condensed non-aqueous solvent from the recovery tank to a mix tank, where it
may be combined with appropriate chemicals to create the chemical mixture.

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38. (Original) A method of claim 37, further comprising an act of pumping the
chemical mixture to the application apparatus.

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39. (Currently Amended) A method of claim 35, wherein the act of applying the chemical mixture with the substrate further comprises ~~comprising~~ ~~acts an act of~~
selecting an application apparatus ~~before the act of applying the chemical mixture~~
~~with the substrate;~~ and utilizing the application apparatus for applying the
30 chemical mixture with the substrate, where the application apparatus is selected
from a group consisting of a foam applicator, spray applicator, and a padding
applicator.

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40. (Currently Amended) A method of claim 39, wherein the act of removing a
35 portion of the chemical mixture further comprises ~~comprising~~ an act of using a

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5 squeeze roller as a removal apparatus, ~~before the act of~~ for removing a portion of
the chemical mixture from the wet substrate.

41. (Currently Amended) A method of claim 40, ~~wherein further comprising an act~~
~~of using a heat exchanger as an evaporator apparatus, before the act of~~
10 evaporating the non-aqueous solvent into a solvent vapor, further comprises an
act of utilizing a heat exchanger as an evaporator apparatus for evaporating the
non-aqueous solvent.

42. (Original) A method of claim 41, further comprising an act of using a steam-
15 based heat exchanger as the heat exchanger.

43. (Currently Amended) A method of claim 42, wherein the act of preventing
solvent vapor from escaping further comprises acts of utilizing a blower apparatus
to create a negative pressure and prevent the vapor from escaping. ~~further~~
20 ~~comprising an act of selecting a blower apparatus before the act of preventing~~
~~vapors from escaping by creating a negative pressure, the blower apparatus being~~
~~selected from a group consisting of a fan, and a blower.~~

44. (Currently Amended) A method of claim 43, wherein the act of removing solvent
25 vapors further comprises an act of utilizing a separator for removing the solvent
vapors, the separator further comprising an act of using a separator comprising a
mist eliminator and a high-efficiency separator, ~~before the act of removing~~
~~remaining solvent vapors.~~

30 45. (Currently Amended) A method of claim 44, wherein the act of heating the
collected solution to vaporize the non-aqueous solvent into a re-vaporized non-
aqueous solvent further comprises ~~comprising~~ an act of using a steam-based heat
exchanger as a re-boiler tank, ~~before the act of~~ for heating the collected solution
to vaporize the non-aqueous solvent into a re-vaporized non-aqueous solvent.

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5 46. (Original) A method of claim 45, further comprising an act of pumping the re-
condensed non-aqueous solvent from the recovery tank to a mix tank, where it
may be combined with appropriate chemicals to create the chemical mixture.

10 47. (Original) A method of claim 46, further comprising an act of pumping the
chemical mixture to the application apparatus.

15 48. (Original) A method of claim 47, further comprising an act of pumping the
chemical mixture to an additional application apparatus, where the chemical
mixture is applied to an additional side of the substrate.

19 49. (Withdrawn) A machine for applying a chemical solution to a substrate,
comprising:
 a means for forming a chemical mixture comprising a non-aqueous
solvent and a chemical solute;
20 a means for applying the chemical mixture with the substrate, forming a
wet substrate; and
 a means for removing the non-aqueous solvent from the wet substrate,
leaving substrate with remaining chemical solution.

25 50. (Withdrawn) A machine as set forth in claim 49, wherein the means for applying
the chemical mixture with the substrate, forming a wet substrate, is selected from
a group consisting of a foam applicator, spray applicator, and a padding
applicator.

30 51. (Withdrawn) A machine as set forth in claim 49, wherein the means for
removing the non-aqueous solvent from the wet substrate comprises:
 a means for removing a portion of the chemical mixture from the wet
substrate, leaving a substrate with remaining chemical mixture;
 a means for lowering a boiling point of the non-aqueous solvent in the
35 substrate with remaining chemical mixture; and

5 a means for evaporating the non-aqueous solvent into a solvent vapor.

52. (Withdrawn) A machine as set forth in claim 51, wherein the means for removing a portion of the chemical mixture from the wet substrate, is a squeeze roller.

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53. (Withdrawn) A machine as set forth in claim 51, wherein the means for evaporating the non-aqueous solvent into a solvent vapor is a heat exchanger.

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54. (Withdrawn) A machine as set forth in claim 53, wherein the heat exchanger is a steam-based heat exchanger.

55. (Withdrawn) A machine as set forth in claim 51, further comprising:
a means for preventing vapors from escaping by creating a negative pressure; and

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a means for removing remaining solvent vapors.

56. (Withdrawn) A machine as set forth in claim 55, wherein the means for preventing vapors from escaping by creating a negative pressure, is selected from a group consisting of a fan, and a blower.

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57. (Withdrawn) A machine as set forth in claim 55, wherein the means for removing remaining solvent vapors, is a separator comprising a mist eliminator and a high efficiency separator.

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58. (Withdrawn) A machine as set forth in claim 55, further comprising a means for collecting any removed non-aqueous solvent.

59. (Withdrawn) A machine as set forth in claim 58, wherein the means for collecting any removed non-aqueous solvent comprises:

- 5 a means for pushing the solvent vapor into a vapor scrubber chamber via a
negative pressure;
a means for condensing the solvent vapor into a condensed liquid solvent
solution;
a means for collecting the condensed liquid solvent solution and the
10 portion of the chemical mixture into a collected solution;
a means for heating the collected solution to vaporize the non-aqueous
solvent into a re-vaporized non-aqueous solvent;
a means for cooling and condensing the re-vaporized non-aqueous solvent
into a re-condensed non-aqueous solvent; and
15 a means for collecting the re-condensed non-aqueous solvent.

60. (Withdrawn) A machine as set forth in claim 59, wherein the means for
condensing the solvent vapor into a condensed liquid solvent solution, is a water
spray mechanism.

20 61. (Withdrawn) A machine as set forth in claim 59, wherein the means for heating
the collected solution to vaporize the non-aqueous solvent into a re-vaporized
non-aqueous solvent, is a steam-based heat exchanger.

25 62. (Withdrawn) A machine as set forth in claim 59, further comprising a means for
pumping the re-condensed non-aqueous solvent from a recovery tank to a mix
tank, where it may be combined with appropriate chemicals to create the chemical
mixture.

30 63. (Withdrawn) A machine as set forth in claim 62, further comprising a means for
pumping the chemical mixture to the application apparatus.

64. (Withdrawn) A machine as set forth in claim 60, wherein the means for applying
the chemical mixture with the substrate, forming a wet substrate, is at least one

5 item selected from a group consisting of a foam applicator, spray applicator, and a padding applicator.

10 65. (Withdrawn) A machine as set forth in claim 64, wherein the means for removing a portion of the chemical mixture from the wet substrate, is a squeeze roller.

66. (Withdrawn) A machine as set forth in claim 65, wherein the means for evaporating the non-aqueous solvent into a solvent vapor is a heat exchanger.

15 67. (Withdrawn) A machine as set forth in claim 66, wherein the heat exchanger is a steam-based heat exchanger.

20 68. (Withdrawn) A machine as set forth in claim 67, wherein the means for preventing vapors from escaping by creating a negative pressure, is at least one item selected from a group consisting of a fan, and a blower.

25 69. (Withdrawn) A machine as set forth in claim 68, wherein the means for removing remaining solvent vapors, is a separator comprising is a mist eliminator and a high efficiency separator.

30 70. (Withdrawn) A machine as set forth in claim 69, wherein the means for heating the collected solution to vaporize the non-aqueous solvent into a re-vaporized non-aqueous solvent, is a steam-based heat exchanger taking the form of a re-boiler tank.

35 71. (Withdrawn) A machine as set forth in claim 70, further comprising a means for pumping the re-condensed non-aqueous solvent from the recovery tank to a mix tank, where it may be combined with appropriate chemicals to create the chemical mixture.

5 72. (Withdrawn) A machine as set forth in claim 71, further comprising a means for
pumping the chemical mixture to the application apparatus.

73. (Withdrawn) A machine as set forth in claim 72, further comprising a means for
pumping the chemical mixture to an additional application apparatus.

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74. (Withdrawn) A machine as set forth in claim 73, further comprising a means for
applying the chemical mixture to an additional side of the substrate.